



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Gregg Motsenbocker

Examiner: Gentle E. Winter

Group Art Unit: 1746

Appl. No: 09/678,619

Filed: October 2, 2000

Date: May 6, 2004

For: Compositions and Methods for  
Releasing Adherent Deposits from  
Surfaces and Substrates

Commissioner of Patents and Trademarks

PO Box 1450

Alexandria, VA 22313

**Supplemental Declaration Under 37 CFR 1.132**

Gregg A. Motsenbocker declares that:

1. He is the sole inventor of and is familiar with the present US Patent Application Number 09/678,619 filed October 2, 2000, entitled Compositions and Methods for Releasing Adherent Deposits from Surfaces and Substrates, and is familiar with the Office Action dated April 6, 2004 that has prompted this supplemental declaration and associated Revised Amendment.

2. A declaration under Rule 132 was submitted for this application, dated January 12, 2004, and that declaration is included here by reference.

3. The use of a Light Hydrotreated Petroleum Distillate (LHPD) as a replacement for kerosene or other petroleum distillates to reduce VOCs is the key advance in the present invention and produces non-obvious effects. The LHPD selected possesses unique chemical and physical characteristics and hence has a unique CAS number, different from kerosene.

4. The LHPD selected is Calumet, a commercially-available LHPD. Further specifying the LHPD, the specific type of Calumet LHPD is called Calumet 420-460. It has a CAS number of 64742-47-8. The CAS number for Kerosene is 8008-20-6.

5. Supplied with this supplemental declaration are three data sheets and a memorandum. Data Sheet #1 is the Material Safety Data Sheet(MSDS) for kerosene. Data Sheet #2 is the MSDS for Calumet 420-460. Data Sheet #3 is the MSDS for Calumet 400-500. The attached memorandum is from Anne Goldsmith, Calumet Technical Services Manager, explaining how certain Calumet product including Calumet 420-460, meet Environmental Protection Agency (EPA) specifications for being Volatile Organic Compound (VOC) exempt for consumer product applications. This is the specification that was met by the design of the product that is the subject of the present application.

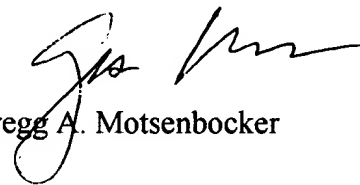
6. Calumet 400-500 is a true LHPD, produced by distilling Kerosene to remove most of the impurities. It possesses different physical and chemical characteristics from kerosene, among which are low VOC content.

7. Calumet 420-460 is a distillation of Calumet 400-500, producing the “heart cut” of kerosene. Calumet 420-460 has lower flammability than Calumet 400-500, and both have lower flammability than kerosene. Refer to Data Sheet #2 and #3, Part 5. Calumet 420-460 is an OSHA Class IIIB combustible liquid, Calumet 400-500 is in OSHA Class IIIA. Refer to Data Sheets #2 and #3, Part 9. To compare their physical characteristics.

8. Kerosene shows substantially different physical and chemical characteristics from the two LHPDs presented (see Data Sheet #1). Any product using kerosene as a carrier solvent will have distinguishably different performance, in terms of smell, chemical properties, storage properties, and cleaning effectiveness, than a product using an LHPD in a similar role. The selection of an LHPD as the carrier solvent for the subject invention was done with the intention of bypassing the well-known drawbacks of kerosene. After experimentation with substituting LHPDs as carrier solvents, the inventor discovered that the resulting mixture possessed non-obvious performance improvements over kerosene-based cleaners.

9. I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under §1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Respectfully submitted,



Gregg A. Motsenbocker

Date: 5-6-04

# DATA SHEET #1

**MSDS**Definition  
of terms**Material Safety Data Sheet for Kerosene****1. Chemical Product****MSDS Number:** U8012**MSDS Date:** 01-31-99**Product Name:** Kerosene

24 Hour Emergency Phone: (210) 979-8346  
Transportation Emergencies: Call Chemtrec at 1-800-424-9300  
MSDS Assistance: (210) 592-4593

**Distributors Name and Address:**

T.W. Brown Oil Co., Inc.  
1857 Knoll Drive  
Ventura, California 93003

**Chemical Name:** Kerosene**Cas Number:** 8008-20-6

**Synonyms/Common Names:** This Material Safety Data Sheet applies to the following product descriptions for Hazard Communication purposes only. Technical specifications vary greatly depending on the product, and are not reflected in this document. Consult specification sheets for technical information.

Kerosene  
K1-Kerosene  
Jet-A Turbine Fuel  
Jet-Q Turbine Fuel  
Low Aromatic Feedstock

Dyed K-1 Kerosene  
JP-5  
JP-8  
Turbine Fuel

Dyed Highway #1 Diesel  
#1 Diesel Fuel, On-Road  
On-Highway #1 Diesel  
Off-Road #1 Diesel

**2. Composition, Information On Ingredients**

**Description:** Kerosene is a complex mixture of hydrocarbons from a variety of chemical processes blended to meet standardized product specifications. Composition varies greatly and includes C9 to C16 hydrocarbons with a boiling range of about 300-550 degrees F. The following is a non-exhaustive list of common components, typical percentage ranges in product, and occupational exposure limits for each. Functional and performance additives may also be present at concentrations below reporting thresholds.

Component or Material Name	%	CAS Number	ACGIH Limits TLV -- STEL -- Units	OSHA Exposure Limits PEL -- STEL -- C/P -- Units
Hydrosulfurized Kerosene	0-100	64742-81-0	100* -- NA -- mg/m3	N/A -- N/A -- N/A -- N/A
Hydrotreated distillate light	0-100	64742-47-8	100* -- NA -- mg/m3	N/A -- N/A -- N/A -- N/A
Kerosene, straight run	0-100	8008-20-6	100* -- NA -- mg/m3	N/A -- N/A -- N/A -- N/A

\* The ACGIH has proposed adopting an exposure limit of 100 mg/m3 for Diesel fuel/Kerosene. NIOSH has also proposed 100 mg/m3 for an 8 hr. TWA or ~14 ppm 8 hr. TWA, based on an average molecular weight of 170 for kerosene like fractions.

Product may contain traces of sulfur and benzene.

### **3. Hazards Identification**

#### **Health Hazard Data:**

1. The major effect of exposure to this product is headache, drowsiness, irritation of the eyes and nose, and lungs. Target organs include the respiratory system, nervous system, and mucous membranes.

2. NIOSH recommends that whole diesel engine exhaust be regarded as a potential occupational carcinogen. Follow OSHA and NSHA rules where diesel engine exhaust fumes may be generated.

3. A life time skin painting study by the American Petroleum Institute has shown that similar naphtha products with a boiling range of 350-700 degrees F usually produce skin tumors and/ or skin cancers in laboratory mice. Only a weak to moderate response occurred. The effect to humans has not been determined. Contact dermatitis (skin irritation) may occur with prolonged or repeated contact.

4. IARC has listed kerosene as probably carcinogenic to humans based on sufficient evidence in experimental animals and limited evidence in humans.

**Hazards of Combustion Products:**Carbon monoxide and carbon dioxide can be found in the combustion products of this product and other forms of hydrocarbon combustion. Carbon monoxide in moderate concentrations can cause symptoms of headache, nausea, vomiting, increased cardiac output, and confusion. Exposure to higher concentrations of carbon monoxide can cause loss of consciousness, heart damage, brain damage, and/or death. Exposure to high concentrations of carbon dioxide can cause simple asphyxiation by displacing available oxygen. Combustion of this and other similar materials should only be carried out in well ventilated areas. The National Kerosene Heater Association has released preliminary test results that indicate no increased emissions of carbon monoxide or nitrogen dioxide resulted from using red-dyed kerosene in "new generation" heaters.

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## MSDS

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## Material Safety Data Sheet for Kerosene

**Medical Condition Generally Aggravated By Exposure:** Medical conditions which have the same symptoms and effects as those outlined under the health hazard information section can be aggravated by exposure to this product.

**Medical Limitation:** N/A

**Routes Of Exposure**

**Inhalation:** Irritation of the upper respiratory tract and eyes, with possible euphoria, dizziness, headache, discoordination, ringing in the ears, convulsions, coma, and respiratory arrest.

**Skin Contact:** Defatting of the skin may occur with continued and prolonged contact. Irritation and burning sensation may occur on exposure to the liquid or mists, as well as the possibility of blisters. Hair loss can occur upon chronic exposure.

**Skin Absorption:** Not significant.

**Eye Contact:** Severe burning sensation with temporary irritation and swelling of lids.

**Ingestion:** Irritation of the mucous membranes of throat, esophagus and stomach which may result in nausea and vomiting; central nervous system depression may occur, if absorbed (see inhalation symptoms above). If aspirated, chemical pneumonitis may occur with potentially fatal results.

**Carcinogenicity Statement:** Kerosene is not listed as carcinogenic by NTP, OSHA, and ACGIH. IARC has listed kerosene as a probable human carcinogen (2A).

**4. First Aid Measures**

**Eyes:** Immediately flush eyes with large amount of water for at least 15 minutes holding lids apart to ensure flushing of the entire eye surface. **SEEK MEDICAL ATTENTION.**

**Skin:** Wash contaminated areas with plenty of soap and water. A soothing ointment may be applied to irritated skin after thoroughly cleansing. Remove contaminated clothing and footwear. **SEEK MEDICAL ATTENTION.**

**Inhalation:** Get person out of contaminated area to fresh air. If breathing has stopped resuscitate and administer oxygen if readily available. **SEEK MEDICAL ATTENTION IMMEDIATELY.**

**INGESTION** Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting. If vomiting occurs spontaneously, keep airway clear. **SEEK MEDICAL ATTENTION IMMEDIATELY.**

**Note to Physician:** Do not induce vomiting, use gastric lavage only. Aspiration of liquid into the lungs could result in Chemical pneumonitis. Use of adrenaline is not

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## Material Safety Data Sheet for Kerosene

**5. Fire and Explosion Data**

**Flash Point:** 100 degrees F PM (minimum)  
**Autoignition Temperature:** 410 degrees F  
**Flammable Limits In Air:** UEL: 5% - LEL: 0.7%

**Extinguishing Media:** Use dry chemical, carbon dioxide, foam or water spray. Water may be ineffective in fighting fires of liquids with low flash points, but water should be used to keep fire exposed containers cool. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect persons attempting to stop a leak.

**Special Fire Fighting Procedures:** Pressure-demand, self contained, breathing apparatus should be provided for fire fighters in buildings or confined areas where product is stored.

**Unusual Fire And Explosion Hazard:** Clothing, rags, or similar organic material contaminated with the product and stored in a closed space may undergo spontaneous combustion. Vapor accumulation is possible, and flashback can occur with explosive force if vapors are ignited.

**6. Accidental Release Measures**

If material is spilled, steps should be taken to contain liquid and prevent discharges to streams or sewer systems and control or stop the loss of volatile materials to the atmosphere. Spills or releases should be reported, if required to the appropriate local, state and federal regulatory agencies.

**Small Spills:** Remove ignition sources. Absorb spilled material with non-combustible materials such as cat litter, dirt, sand, or petroleum sorbent pads/pillows. Do not use combustible materials like rags, wood chips, or saw dust. Remove contaminated materials to an appropriate disposal container.

**Large Spills:** Remove ignition sources. Dike spill area with sand or dirt to contain material and cover sewers/drains. Remain upwind and keep unnecessary people away. Contact trained emergency response team for cleanup. Remove liquid using grounded suction pumps, isolate hazard area and deny entry.

**7. Handling and Storage Information**

Store only in approved containers. Protect containers against physical damage. Outside or detached storage is preferred. Separate from oxidizing materials. Store in cool, well ventilated area of non-combustible construction away from possible sources of ignition. Keep away from incompatible materials and follow OSHA 29 CFR 1910.106 and NFPA 30 for storage requirements.

**Product Use:** This product is intended for use as a fuel in engines and heaters designed for kerosene or diesel fuels, and for use in engineered processes. Use in other applications may result in higher exposures and require additional controls, such as local exhaust ventilation and personal protective equipment.

**8. Exposure Controls/Personal Protection**

**Ventilation Requirements:** Work in well ventilated areas using good engineering

practices to process, transfer and store. Special ventilation is not required unless product is sprayed or heated. High volume use may require engineering controls.

## Specific Personal Protective Equipment

**Respiratory:** Respiratory protection is not required unless product is sprayed or heated. Use NIOSH approved respiratory protection following manufacturer's recommendations where spray, mists, or vapors may be generated. Supplied air respiratory protection is required for IDLH areas. See 29 CFR 1910.134 for OSHA Respirator Protection regulations.

**Eye:** Face shield and goggles or chemical goggles should be worn where mist or spray may be generated, and where splashing occurs. Shower and eyewash facilities should be accessible.

**Gloves:** Impermeable protective gloves such as nitrile gloves should be worn during routine handling of this product. Barrier creams may also be appropriate where tactile sensitivity is required.

**Other Clothing and Equipment:** Clothing contaminated with this product should be removed and laundered before reuse. Items which can not be laundered should be discarded. Allow contaminated items to air dry or hang in a well ventilated area. Spontaneous combustion or fire may result from contaminated materials being placed together before drying.

## Exposure Monitoring

**Biological:** No applicable procedure, breath analysis for hydrocarbons has been suggested.

**Personal/Area:** Monitor for kerosene using both active and passive monitors employing charcoal adsorption follow by gas chromatography. An average molecular weight of 170 has been suggested as the average value to convert the determined weight of hydrocarbons to ppm. Direct reading colorimetric tubes are available to evaluate short term exposure.

## 9. Physical and Chemical Properties

**Appearance and Odor:** Colorless to pale straw, or red oily liquid with characteristic odor.

**Viscosity:** Specification dependent, 1.0-1.9 cSt @ 40 degrees C for K1, 8.0 cSt max @ -4 degrees C for Jet-A.

**Boiling Range @ 760 mm Hg:** 304-574 degrees F (151-301 degrees C)

**Vapor Density (Air=1):** 4.5

**Evaporation Rate (BuAc=1):** N/A

**Specific Gravity (H2O=1):** 0.80-0.81

**Bulk Density At 60 degrees F:** 6.67 lbs./gal.

**Solubility in H2O % by WT.:** Insoluble

**Freezing Point:** 0 degrees F (-18 degrees C)

**Vapor Pressure:** 0.5 mmHg @ 20 degrees C

**% Volatiles By Vol.:** N/A

**API Gravity:** Specification dependent

**pH:** NA

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advised. Treat symptomatically.

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## Material Safety Data Sheet for Kerosene

**10. Stability and Reactivity Information**

**Conditions Contributing to Instability:** Under normal conditions, the material is stable. Avoid sources of ignition such as flames, hot surfaces, sparks, and electrical equipment.

**Incompatibility:** Avoid contact with strong oxidizers such as chlorine, fluorine, nitrogen tetroxide, concentrated oxygen, and sodium hypochlorite or other hypochlorites.

**Hazardous Decomposition Products:** Thermal decomposition products may include carbon monoxide, carbon dioxide, oxides of sulfur and nitrogen, and other toxic gases

**Hazardous Polymerization:** Material is not known to polymerize.

**11. Toxicological Information**

For detailed information, contact MSDS Assistance at (210) 592-4593

**12. Ecological Information**

For detailed information, contact MSDS Assistance at (210) 592-4593

**13. Disposal Considerations**

Shipment, storage, disposal, and cleanup actions of waste materials are regulated under local, state and federal rules. Contact the appropriate agencies if uncertain of applicability. Waste product and contaminated material having a flash point below 140 degrees F is considered a hazardous waste. DOT Hazardous Waste Number D001 applies. Consult 40 CFR 262 for EPA disposal requirements.

**14. Transport Information**

DOT Proper Shipping Name	Kerosene	Diesel Fuel	Fuel, aviation, turbine engine
DOT Hazard Class*	3*	3*	3*
DOT Packing Group (PG)	III	III	III
I.D. Number	UN 1223*	NA 1993	UN 1863*
Required Labeling	Flammable Liquid	Flammable Liquid	Flammable Liquid

\* Since this product has a flash point >100 degrees F and no other hazard class applies, it may be reclassified as Combustible Liquid and NA 1993 substituted for the product specific I.D.

Number above. Consult 49 CFR 173.120 for specific details.

## 15. Regulatory Information

### TSCA (Toxic Substance Control Act) Inventory

Gasoline is listed in the TSCA inventory.

### SARA (Superfund Amendments and Reauthorization Act) TITLE III

This product is reportable under SARA Title III, Sections 311 & 312 as a hazardous substance.

### Hazard Categories Applicable under 40 DFR 370.2 (SARA Section 311):

Acute Health	Chronic Health	Pressure	Fire	Reactive
Yes	Yes	No	Yes	No

### Components Listed under 40 CFR 372.2 (SARA Section 311):

This product does not contain chemicals identified as toxic by EPA under CFR part 372 and is not subject to the reporting requirements of this section.

### State Regulations:

**California Proposition 65:** This product does not contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

## 16. Other Information

### NFPA (National Fire Protection Association) Hazard Ratings Codes\*

Fire	Health	Reactivity	Other
2	1	0	Blank

\*Based on Standard System for the Identification of the Fire Hazards of Materials, NFPA No. 704 M

This material safety data sheet was prepared by T. W. Brown Oil Co., Inc. in accordance with 29 CFR 1910.1200. All information, recommendations and suggestions appearing herein concerning this product are based upon tests and data believed to be reliable, however, it is the user's responsibility to determine the safe toxicity and suitability for his own use of the product described herein. Since the actual use by others is beyond our control, no guarantee expressed or implied is made by T. W. Brown Oil Co., Inc. as to the effects of such use, the results to be obtained or the safety and toxicity of the product nor does T. W. Brown Oil Co. Inc. assume any liability arising out of use by others of the product referred to

herein. Nor is the information herein to be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations.

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# MSDS Document

## Product Calumet 420-460

### 1. Chemical Product and Company Identification

Trade Name of this Product Calumet 420-460

Synonyms: 0451-00

MSDS ID MSDS01973

**Manufacturer**

Calumet Lubricants Co. CCV

1756 old hwy 7

Cotton Valley, LA. 71018

**Contact Name**

Anne Goldsmith

**Phone Number**

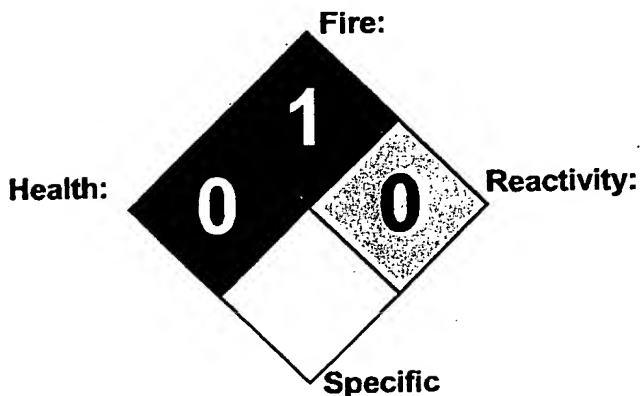
(317) 328-5660

**Emergency Phone**

CHEMTREC (800) 424-9300

unused

8/27/2002



### 2. Composition and Information on Ingredients

Ingredient	CAS Number	Weight %	ACGIH TLV	PEL	STEL
Hydrotreated Light Distillates (petroleum)	64742-47-8	100 %		500 ppm	

### 3. Hazard Identification

\*\*\*\*\*EMERGENCY OVERVIEW\*\*\*\*\*

- \* Warning: Combustible Liquid and Vapor.
- \* This product is a clear, hydrocarbon liquid.
- \* It has a solvent petroleum odor. The product floats on water.
- \* The Flash Point is >100 degrees F.
- \* Keep away from heat, sparks, and flame.
- \* When burned the product produces carbon monoxide and other asphyxiants during combustion.
- \* Avoid breathing vapor. Harmful if inhaled and may cause delayed lung injury.

- \* Aspiration hazard if swallowed - can enter lungs and cause damage.
  - \* Use ventilation adequate to keep vapor below recommended exposure limits.
  - \* Avoid contact with eyes, skin and clothing. Material splashed into the eyes will irritate tissues. Gently flush material from eyes with clean water.
  - \* Unprotected exposure to this product will cause skin dryness.
  - \* Remove product soaked clothing and wash with mild soap. Wash thoroughly after handling.
  - \* As with any petroleum product, avoid mixing this product with strong oxidizers.
  - \* This product is not listed on the NTP, IARC, OSHA, or ACGIH lists of suspected or confirmed carcinogens.
  - \* This product may be toxic to fish but will be toxic to birds and wildlife through ingestion during pelage cleaning.
  - \* This product is readily biodegradable in the presence of air and sunlight.
  - \* Spilled material is slippery and may cause falls.
- \*\*\*\*\*END OF EMERGENCY OVERVIEW\*\*\*\*\*

## POTENTIAL HEALTH EFFECTS

### PRIMARY ROUTE(S) OF ENTRY

Skin.

### EYES

Tests on similar materials suggest acute irritation be expected.

### SKIN

Tests on similar materials indicate acute irritation is expected to occur upon short-term exposure, chronic dermatitis on prolonged contact.

### INGESTION

**ACUTE ASPIRATION HAZARD.** Tests on similar materials indicate possibility of the following symptoms: headache, nausea, drowsiness, fatigue, pneumonitis, pulmonary edema, central nervous system depression, convulsions, and loss of consciousness.

### INHALATION

Tests on similar material indicate the possibility of the following symptoms: headache, nasal and respiratory irritation, nausea, drowsiness, breathlessness, fatigue, central nervous system depression, convulsions, and loss of consciousness.

### CHRONIC (CANCER INFORMATION)

Prolonged and/or repeated contact with this material may produce skin irritation and inflammation.

Carcinogen listed by : National Toxicology Program (No)

CHRONIC (CANCER INFORMATION) - Continued

I. A. R. C. (NO)

OSHA (NO)

ACGIH (NO)

This product does not require a cancer hazard warning in accordance with the OSHA Hazard Communication Standard.

### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Personnel with pre-existing skin disorders should avoid contact with this product.

#### 4. First Aid Information

##### EYES

Flush eyes immediately with water for at least 15 minutes or until irritation subsides, occasionally lifting lower and upper lids. Get medical attention promptly.

##### SKIN

Wash thoroughly with soap and water. Immediately remove contaminated clothing and wash before reuse. If irritation or rash develops, obtain medical assistance. Immediately remove soaked clothing.

##### INGESTION

CALL PHYSICIAN IMMEDIATELY. Do not induce vomiting except at the instruction of a physician. Never give anything by mouth to an unconscious person.

##### INHALATION

Remove patient to fresh air and consult a physician. If breathing is difficult, give oxygen. If not breathing give artificial respiration.

#### 5. Fire Fighting Measures

##### FLAMMABLE PROPERTIES

FLASH POINT: >180°F >82°C Tag Closed Cup (D56)

AUTOIGNITION: >550°F >288°C

FLAMMABILITY CLASS: IIIB

LOWER EXPLOSIVE LIMIT (%): 0.7 vol % (estimated)

UPPER EXPLOSIVE LIMIT (%): 6 vol % (estimated)

##### FIRE AND EXPLOSION HAZARD

Material is combustible.

##### EXTINGUISHING MEDIA

Dry Chemical, carbon dioxide, and foam. CAUTION: Water stream may spread fire.

##### FIRE FIGHTING INSTRUCTIONS

Use water spray only to cool containers exposed to flames. Do not enter enclosed or a confined work space without proper protective equipment. Fire fighting personnel should wear respiratory protection (positive pressure if available). If leak or spill has not ignited, use water spray to disperse the vapors.

Products of combustion include fumes, smoke and carbon monoxide.

#### 6. Accidental Release Measures

NOTIFICATION PROCEDURES: Notify emergency response personnel. Evacuate area and remove ignition sources. Build dike to contain flow. Remove free liquid. Shut off ignition source. Report spills as required to appropriate authorities. U. S. Coast Guard regulations require immediate reporting of spills that could reach any waterway including intermittent dry creeks. Report spill to Coast Guard toll free number (800) 424-8802. In case of accident or road spill notify CHEMTREC (800) 424-9300.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED: Absorb on inert material. Shovel up and dispose of at an appropriate waste disposal facility in accordance with current applicable laws and regulations, and product characteristics at time of disposal.

**ENVIRONMENTAL PRECAUTIONS:** Prevent spills from entering storm sewers or drains and contact with soil.

**PERSONAL PRECAUTIONS:** See Section 8

## 7. Handling and Storage

### HANDLING AND STORAGE PRECAUTIONS

Store as OSHA Class IIIB combustible liquid. Keep away from flames, sparks or hot surfaces. Never use a torch to cut or weld on or near container. Empty oil containers can contain explosive vapors. Wash thoroughly after handling. Do not store with strong oxidizers.

### STORAGE PRECAUTIONS

Empty containers retain product residue (liquid and vapor) and can be dangerous.

Storage Temperature: ambient

Storage Pressure: atmospheric

### WORK/HYGIENIC PRACTICES

Wash hands with soap and water before eating, drinking, smoking or use of toilet facilities. Take a shower after work if general contact occurs. Remove oil-soaked clothing and launder before reuse. Launder or discard contaminated shoes and leather gloves.

## 8. Exposure Controls and Personal Protection

### ENGINEERING CONTROLS

Use adequate ventilation to keep oil mists of this material below applicable standard(s). See Section on occupational exposure limits.

### EYE/FACE PROTECTION

Safety glasses, splash goggles, or face shield as appropriate. Have suitable eye water wash available.

### SKIN PROTECTION

Avoid prolonged and/or repeated skin contact. If prolonged contact cannot be avoided, wear protective impervious gloves and clothing. Acceptable materials for gloves are neoprene; nitrile; viton.

### OTHER/GENERAL PROTECTION

If there is a likelihood of splashing, an oil resistant clothing should be worn. Never wear oil soaked clothing. Launder or dry clean before wearing. Discard oil soaked shoes. Affix warning labels on containers in accordance with 29 CFR 1910.1200 (Hazard Communication Standard).

Loading, unloading, tank gauging, etc., remain upwind. Request assistance of safety and industrial hygiene personnel to determine air concentrations.

### INGREDIENT NAME, CAS #, EXPOSURE LIMITS, PERCENT BY VOLUME

Hydrotreated Light Distillate Petroleum Distillate(Naphtha), CAS NUMBER: 64742-47-8, OSHA TWA-400ppm, 100.0



## 9. Physical and Chemical Properties

Product CAS Number 64742-47-8

### APPEARANCE

Clear liquid.

### ODOR

Light bland petroleum

### ODOR THRESHOLD

N.D.

### BASIC PHYSICAL PROPERTIES

PHYSICAL STATE: Liquid

BOILING POINT: IBP >415 (D86)°F IBP >213 (D86)°C

MELTING POINT: n/av. (D97)°F n/av.°C

VAPOR PRESSURE: .0005 PSIA @ 68°F

VAPOR DENSITY(air=1): n/av.

EVAPORATION RATE: .025 (BUTYL ACETATE=1)

SPECIFIC GRAVITY @ 60°F(water=1): 0.79

MOLECULAR WEIGHT: n/av.

SOLUBILITY (H2O): negligible in water

PERCENT VOLATILES: n/av.

VISCOSITY: 1.8 cst @ 40°C

Physical data may vary slightly to meet specifications.

## 10. Stability and Reactivity

STABILITY: Stable under normal conditions

### CONDITIONS TO AVOID (STABILITY)

Sources of ignition.

### INCOMPATIBLE MATERIALS

Strong oxidizers.

### HAZARDOUS DECOMPOSITION PRODUCTS

Incomplete combustion may produce carbon monoxide and other asphyxiants.

HAZARDOUS POLYMERIZATION: will not occur

## 11. Toxicological Information

### ACUTE STUDIES

### EYE EFFECTS

Slight irritation on contact.

#### **SKIN EFFECTS**

May cause irritation or dermatitis with prolonged and repeated contact.

#### **ACUTE ORAL EFFECTS**

Tests on similar materials indicate an order of acute oral toxicity.

#### **ACUTE INHALATION EFFECTS**

Acute toxicity expected on inhalation.

This product is not listed as carcinogenic or a potential carcinogen by the National Toxicology Program, by the I.A.R.C. monographs or by OSHA. Therefore, if the precautions outlined in this

bulletin are followed to minimize repeated or prolonged skin contact which could cause irritation, these oils should pose no carcinogenic hazard to humans. Prolonged repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis. Nevertheless, good industrial hygienic practices are recommended.

### **12. Ecological Information**

If applied to leaves, this product may kill grasses and small plants by interfering with transpiration and respiration. This product is not toxic to fish but may coat gill structures resulting in suffocation if spilled in shallow, running water. Product may be moderately toxic to amphibians by preventing dermal respiration. This product may cause gastrointestinal distress to birds and mammals through ingestion during pelage grooming.

This product is rapidly biodegradable. Biodegradation is possible within 90 to 120 days in aerobic environments at temperatures above 70o F (21o C).

### **13. Disposal Considerations**

Product as supplied does not meet the characteristics of a hazardous waste as defined in 40 CFR 261.21-24. If mixed with other products, waste mixture must be characterized. DO NOT dispose of this product in drains or storm sewers. DO NOT dispose of this product in a landfill without prior solidification. Waste product should be recycled. Consider waste brokering.

### **14. Transportation Information**

PROPER SHIPPING NAME: Petroleum Distillates, n.o.s., Combustible Liquid, UN1268, PG III

HAZARD CLASS: Combustible Liquid

DOT IDENTIFICATION NUMBER: UN1268

DOT PROPER SHIPPING LABEL: Flammable or Combustible

### **15. Regulatory Information**

U.S. FEDERAL REGULATORY INFORMATION

SARA 302 Threshold Planning Quantity: NOT APPLICABLE

SARA 304 Reportable Quantity: NOT APPLICABLE

SARA TITLE III - Section 311/312 Hazard classes:

- Immediate/Acute Health Effects: yes
- Delayed/Chronic Health Effects: no
- Fire Hazard: no
- Sudden Release of Pressure Hazard: no
- Reactivity Hazard: no

EPA/TSCA Inventory: The components of this product are listed on the EPA/TSCA inventory of chemicals.

SARA TITLE III - Section 313 Supplier notification:

The following chemicals are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and reauthorization Act of 1986 and 40 CFR Part 372: none

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA): No chemicals in this product are subject to the reporting requirements of CERCLA Section 101(14)(F). When this product is used in a mixture, or as an ingredient in another product, or in a manufacturing operation, the petroleum exclusion may terminate and an accidental spill may require reporting to the National Response Center.

#### CANADIAN REGULATORY INFORMATION

This product is listed on the Canadian Domestic Substances List.

#### EUROPEAN (ECC) REGULATORY INFORMATION

This product is listed on the European Chemical Registry. EINECS # 265-149-8.

## 16. Other Information

SUPERCEDES MSDS DATED: 09/07/03

Revised: 11/04/03

Section: Add evaporation rate

#### DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

The Information contained herein is based upon data available to us, and reflects our best professional judgement. However, no warranty of merchantability, fitness for any use, or other warranty is expressed or implied regarding the accuracy of such data, the results to be obtained from the use thereof, or that any such use does not infringe any patent. Since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume any responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.



# MSDS Document

## Product Calumet 400-500, <1%

### 1. Chemical Product and Company Identification

Trade Name of this Product Calumet 400-500, <1%

Synonyms: 0501-00

MSDS ID MSDS01971

**Manufacturer**

Calumet Lubricants Co. CCV

1756 old hwy 7

Cotton Valley, LA. 71018

**Contact Name**

Anne Goldsmith

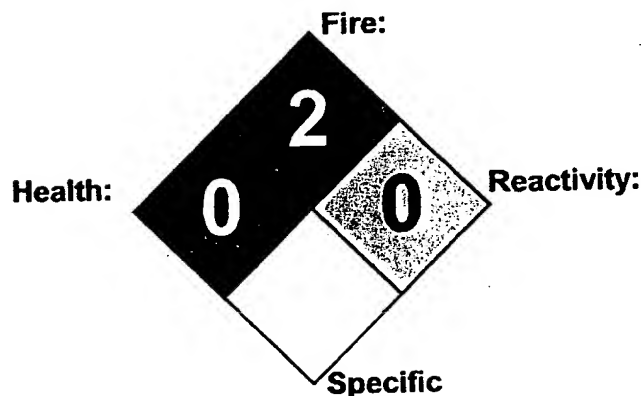
**Phone Number**

(317) 328-5660

**Emergency Phone**

CHEMTREC (800) 424-9300

unused 7/30/2002



### 2. Composition and Information on Ingredients

Ingredient	CAS Number	Weight %	ACGIH TLV	PEL	STEL
Hydrotreated Light Distillates (petroleum)	64742-47-8	100.0 %		500 ppm	

### 3. Hazard Identification

\*\*\*\*\*EMERGENCY OVERVIEW\*\*\*\*\*

- \* Warning: Combustible Liquid and Vapor.
- \* This product is a clear, hydrocarbon liquid.
- \* It has a solvent petroleum odor. The product floats on water.
- \* The Flash Point is >100 degrees F.
- \* Keep away from heat, sparks, and flame.
- \* When burned the product produces carbon monoxide and other asphyxiants during combustion.
- \* Avoid breathing vapor. Harmful if inhaled and may cause delayed lung injury.

- \* Aspiration hazard if swallowed - can enter lungs and cause damage.
  - \* Use ventilation adequate to keep vapor below recommended exposure limits.
  - \* Avoid contact with eyes, skin and clothing. Material splashed into the eyes will irritate tissues. Gently flush material from eyes with clean water.
  - \* Unprotected exposure to this product will cause skin dryness.
  - \* Remove product soaked clothing and wash with mild soap. Wash thoroughly after handling.
  - \* As with any petroleum product, avoid mixing this product with strong oxidizers.
  - \* This product is not listed on the NTP, IARC, OSHA, or ACGIH lists of suspected or confirmed carcinogens.
  - \* This product may be toxic to fish but will be toxic to birds and wildlife through ingestion during pelage cleaning.
  - \* This product is readily biodegradable in the presence of air and sunlight.
  - \* Spilled material is slippery and may cause falls.
- \*\*\*\*\*END OF EMERGENCY OVERVIEW\*\*\*\*\*

## POTENTIAL HEALTH EFFECTS

### PRIMARY ROUTE(S) OF ENTRY

Skin.

#### EYES

Tests on similiar materials suggest acute irritation be expected.

#### SKIN

Tests on similiar materials indicate acute irritation is expected to occur upon short-term exposure, chronic dermatitis on prolonged contact.

#### INGESTION

ACUTE ASPIRATION HAZARD. Tests on similar materials indicate possibility of the following symptoms: headache, nausea, drowsiness, fatigue, pneumonitis, pulmonary adema, central nervous system depression, convulsions, and loss of consciousness.

#### INHALATION

Tests on similiar material indicate the possibility of the following symptoms: headache, nasal and respiratory irritation, nausea, drowsiness, breathlessness, fatigue, central nervous system depression, convulsions, and loss of consciousness.

#### CHRONIC (CANCER INFORMATION)

Prolonged and/or repeated contact with this material may produce skin irritation and inflammation.

Carcinogen listed by : National Toxicology Program (No)

CHRONIC (CANCER INFORMATION) - Continued

I. A. R. C. (NO)

OSHA (NO)

ACGIH (NO)

This product does not require a cancer hazard warning in accordance with the OSHA Hazard Communication Standard.

#### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Personnel with pre-existing skin disorders should avoid contact with this product.

#### 4. First Aid Information

##### EYES

Flush eyes immediately with water for at least 15 minutes or until irritation subsides, occasionally lifting lower and upper lids. Get medical attention promptly.

##### SKIN

Wash thoroughly with soap and water. Immediately remove contaminated clothing and wash before reuse. If irritation or rash develops, obtain medical assistance. Immediately remove soaked clothing.

##### INGESTION

CALL PHYSICIAN IMMEDIATELY. Do not induce vomiting except at the instruction of a physician. Never give anything by mouth to an unconscious person.

##### INHALATION

Remove patient to fresh air and consult a physician. If breathing is difficult, give oxygen. If not breathing give artificial respiration.

#### 5. Fire Fighting Measures

##### FLAMMABLE PROPERTIES

FLASH POINT: >170°F >76°C Tag Closed Cup

AUTOIGNITION: >600°F >315°C

FLAMMABILITY CLASS: IIIA

LOWER EXPLOSIVE LIMIT (%): 0.7 vol % (estimated)

UPPER EXPLOSIVE LIMIT (%): 6 vol % (estimated)

##### FIRE AND EXPLOSION HAZARD

Material is combustible.

##### EXTINGUISHING MEDIA

Dry Chemical, carbon dioxide, and foam. CAUTION: Water stream may spread fire.

##### FIRE FIGHTING INSTRUCTIONS

Use water spray only to cool containers exposed to flames. Do not enter enclosed or a confined work space without proper protective equipment. Fire fighting personnel should wear respiratory protection (positive pressure if available). If leak or spill has not ignited, use water spray to disperse the vapors.

Products of combustion include fumes, smoke and carbon monoxide.

#### 6. Accidental Release Measures

NOTIFICATION PROCEDURES: Notify emergency response personnel. Evacuate area and remove ignition sources. Build dike to contain flow. Remove free liquid. Shut off ignition source. Report spills as required to appropriate authorities. U. S. Coast Guard regulations require immediate reporting of spills that could reach any waterway including intermittent dry creeks. Report spill to Coast Guard toll free number (800) 424-8802. In case of accident or road spill notify CHEMTREC (800) 424-9300.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED: Absorb on inert material. Shovel up and dispose of at an appropriate waste disposal facility in accordance with current applicable laws and regulations, and product characteristics at time of disposal.

**ENVIRONMENTAL PRECAUTIONS:** Prevent spills from entering storm sewers or drains and contact with soil.

**PERSONAL PRECAUTIONS:** See Section 8

## 7. Handling and Storage

### HANDLING AND STORAGE PRECAUTIONS

Store as OSHA Class IIIA combustible liquid. Keep away from flames, sparks or hot surfaces. Never use a torch to cut or weld on or near container. Empty oil containers can contain explosive vapors. Wash thoroughly after handling. Do not store with strong oxidizers.

### STORAGE PRECAUTIONS

Empty containers retain product residue (liquid and vapor) and can be dangerous.  
Storage Temperature: ambient  
Storage Pressure: atmospheric

### WORK/HYGIENIC PRACTICES

Wash hands with soap and water before eating, drinking, smoking or use of toilet facilities. Take a shower after work if general contact occurs. Remove oil-soaked clothing and launder before reuse. Launder or discard contaminated shoes and leather gloves.

## 8. Exposure Controls and Personal Protection

### ENGINEERING CONTROLS

Use adequate ventilation to keep oil mists of this material below applicable standard(s). See Section on occupational exposure limits.

### EYE/FACE PROTECTION

Safety glasses, splash goggles, or face shield as appropriate. Have suitable eye water wash available.

### SKIN PROTECTION

Avoid prolonged and/or repeated skin contact. If prolonged contact cannot be avoided, wear protective impervious gloves and clothing. Acceptable materials for gloves are neoprene; nitrile; viton.

### OTHER/GENERAL PROTECTION

If there is a likelihood of splashing, an oil resistant clothing should be worn. Never wear oil soaked clothing. Launder or dry clean before wearing. Discard oil soaked shoes. Affix warning labels on containers in accordance with 29 CFR 1910.1200 (Hazard Communication Standard).

Loading, unloading, tank gauging, etc., remain upwind. Request assistance of safety and industrial hygiene personnel to determine air concentrations.

### INGREDIENT NAME, CAS #, EXPOSURE LIMITS, PERCENT BY VOLUME

Hydrotreated Light Distillate, CAS NUMBER: 64742-47-8, OSHA TWA 400ppm, 100%



## 9. Physical and Chemical Properties

Product CAS Number 64742-47-8

### APPEARANCE

Clear liquid.

### ODOR

Light bland petroleum

### ODOR THRESHOLD

N.D.

### BASIC PHYSICAL PROPERTIES

PHYSICAL STATE: Liquid

BOILING POINT: IBP >400°F IBP >204°C

MELTING POINT: N/A°F N/A°C

VAPOR PRESSURE: 0.20 mm Hg @ 68°F

VAPOR DENSITY(air=1): n/av.

SPECIFIC GRAVITY @ 60°F(water=1): 0.78

MOLECULAR WEIGHT: n/av.

SOLUBILITY (H2O): negligible in water

PERCENT VOLATILES: 100

VISCOSITY: 1.8 cst @ 40°C

Physical data may vary slightly to meet specifications.

## 10. Stability and Reactivity

STABILITY: Stable under normal conditions

### CONDITIONS TO AVOID (STABILITY)

Sources of ignition.

### INCOMPATIBLE MATERIALS

Strong oxidizers.

### HAZARDOUS DECOMPOSITION PRODUCTS

Incomplete combustion may produce carbon monoxide and other asphyxiants.

HAZARDOUS POLYMERIZATION: will not occur

## 11. Toxicological Information

### ACUTE STUDIES

#### EYE EFFECTS

Slight irritation on contact.

#### SKIN EFFECTS

May cause irritation or dermatitis with prolonged and repeated contact.

#### ACUTE ORAL EFFECTS

Tests on similar materials indicate an order of acute oral toxicity.

#### **ACUTE INHALATION EFFECTS**

Acute toxicity expected on inhalation.

This product is not listed as carcinogenic or a potential carcinogen by the National Toxicology Program, by the I.A.R.C. monographs or by OSHA. Therefore, if the precautions outlined in this bulletin are followed to minimize repeated or prolonged skin contact which could cause irritation, these oils should pose no carcinogenic hazard to humans. Prolonged repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis. Nevertheless, good industrial hygienic practices are recommended.

### **12. Ecological Information**

If applied to leaves, this product may kill grasses and small plants by interfering with transpiration and respiration. This product is not toxic to fish but may coat gill structures resulting in suffocation if spilled in shallow, running water. Product may be moderately toxic to amphibians by preventing dermal respiration. This product may cause gastrointestinal distress to birds and mammals through ingestion during pelage grooming.

This product is rapidly biodegradable. Biodegradation is possible within 90 to 120 days in aerobic environments at temperatures above 70o F (21o C).

### **13. Disposal Considerations**

Product as supplied does not meet the characteristics of a hazardous waste as defined in 40 CFR 261.21-24. If mixed with other products, waste mixture must be characterized. DO NOT dispose of this product in drains or storm sewers. DO NOT dispose of this product in a landfill without prior solidification. Waste product should be recycled. Consider waste brokering.

### **14. Transportation Information**

PROPER SHIPPING NAME: Petroleum Distillates, n.o.s., Combustible Liquid, UN1268, PG III

HAZARD CLASS: Combustible Liquid  
DOT IDENTIFICATION NUMBER: UN1268  
DOT PROPER SHIPPING LABEL: Flammable or Combustible

### **15. Regulatory Information**

U.S. FEDERAL REGULATORY INFORMATION  
SARA 302 Threshold Planning Quantity: NOT APPLICABLE  
SARA 304 Reportable Quantity: NOT APPLICABLE  
SARA TITLE III - Section 311/312 Hazard classes:  
- Immediate/Acute Health Effects: yes

- Delayed/Chronic Health Effects: no
- Fire Hazard: yes
- Sudden Release of Pressure Hazard: no
- Reactivity Hazard: no

EPA/TSCA Inventory: The components of this product are listed on the EPA/TSCA inventory of chemicals.

SARA TITLE III - Section 313 Supplier notification:  
The following chemicals are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and reauthorization Act of 1986 and 40 CFR Part 372: n/av.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA): No chemicals in this product are subject to the reporting requirements of CERCLA Section 101(14)(F). When this product is used in a mixture, or as an ingredient in another product, or in a manufacturing operation, the petroleum exclusion may terminate and an accidental spill may require reporting to the National Response Center.

CANADIAN REGULATORY INFORMATION  
The component of this product is listed on the Canadian (DSL) Domestic Substances List.

EUROPEAN (ECC) REGULATORY INFORMATION  
The component of this product is listed on the European Inventory of Existing Commercial Substances. EINECS# 265-149-8.

## 16. Other Information

SUPERCEDES MSDS DATED: 06/17/03  
Revised: 09/07/03  
Section: Change proper shipping name

### DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

The information contained herein is based upon data available to us, and reflects our best professional judgement. However, no warranty of merchantability, fitness for any use, or other warranty is expressed or implied regarding the accuracy of such data, the results to be obtained from the use thereof, or that any such use does not infringe any patent. Since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume any responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.



**CALUMET LUBRICANTS CO.**

2780 Waterfront Pkwy. E. Dr., Suite 200  
Indianapolis, IN 46214  
Phone: 317/328-5660  
Fax: 317/328-5668



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**FACSIMILE TRANSMISSION**

From the desk of:

Anne B. Goldsmith  
Marketing Technical Services Manager  
Calumet Lubricants Co.  
800-437-3188

Date: 3/9/04

To: Greg

Total Pages: 2

Comments:

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CALUMET LUBRICANTS CO.



2780 Waterfront Pkwy. E. Dr., Suite 200  
Indianapolis, IN 46214  
Phone: 317/328-5660  
Fax: 317/328-5668

To: Calumet Sales  
From: Anne Goldsmith, Technical Services  
Date: May 31<sup>st</sup>, 2002  
Re: National Volatile Organic Compound Emission Standards for Consumer Products

The Environmental Protection Agency has published, under Title 40, Volume 5, Parts 53 to 59, regulations regarding volatile organic compounds (VOC's) and consumer products. Under this regulation, there are a few noteworthy statements that may be beneficial to you in the field. In short, if any of our products:

- a) has a vapor pressure of less than 0.1 millimeters of mercury at 20 degrees Celsius; or
- b) consists of more than 12 carbon atoms, if the vapor pressure is unknown; or
- c) has a melting point higher than 20 degree's Celsius and does not sublime

then for CONSUMER PRODUCTS APPLICATIONS ONLY they are not required to be counted as VOC's for reporting purposes. Please be aware that some of the players in the market are stating that their products are "VOC Exempt", per my discussions with the EPA, this terminology is legally incorrect. You must state that you are exempt for Consumer Goods applications.

The products in our line that comply with these limits are as follows:

Calumet 420-460  
Calprint 35  
450-HI  
450-HI 200  
CV-520  
600 Solvent  
Calprint 38

I have a copy of the title publication and it's web address for anyone that would like documentation. These products have been evaluated by an independent laboratory and meet the low vapor pressure requirements of the Code of Federal Regulations Title 40, Volume 5, Part 59 set by the Environmental Protection Agency for volatile organic compounds in consumer products. Please share this letter with any customers who may have questions regarding this topic.

Regards,

Anne B. Goldsmith  
Marketing Technical Services Manager  
Calumet Lubricants Co.